REMARKS

The rejection of Claims 1 and 4-6 under 35 U.S.C. § 102(b) as anticipated by EP 0684620 (Shiono et al), is respectfully traversed.

As recited in Claim 1, an embodiment of the present invention is an aluminum electrolytic capacitor comprising an anode, a cathode comprising aluminum and an electrolytic solution containing an onium salt of fluorine-containing anion, **wherein the electrolytic solution has a water concentration of 1% by weight or less**. (Emphasis added.)

As described in the specification under "Background Art" beginning at page 1, line 26, aluminum electrolytic capacitors using an electrolytic solution containing an onium salt of fluorine-containing anion, as discussed above, have many benefits, but, as described in the specification beginning at page 3, line 22, Applicants have discovered that moisture in the electrolytic solution considerably affects performance of the capacitor. Applicants have thus discovered that when the water concentration of the electrolytic solution exceeds 1% by weight, inferior results are obtained. Thus, superior results are obtained when the moisture content is 1% by weight or less. Such superior results are shown by the comparative data in the specification.

For example, Examples 1 and 2 are according to the present invention. Comparative Example 1 is analogous to Example 1, but it has a moisture content above the presently-recited maximum. In Examples 1 and 2, and Comparative Example 1, the electrolyte had the same water concentration (10 ppm) in each, but the Examples and Comparative Example were assembled under different humidity conditions, resulting in different water concentrations in the capacitor's electrolytic solution. Examples 1 and 2, and Comparative Example 1, are described in the specification beginning at page 64, line 27. They were tested

for various properties, as described beginning at page 66, line 17. The results are shown in Table 1 at page 68, line 12, reproduced below:

Table 1

		Example 1	Example 2	Comparative Example 1
Moisture content of electrolytic solution in capacitor (% by weight)		0.01	0.6	3
XPS of Al2p on cathode surface (eV)		74.9	74.9	76.0
Electric conductivity of electrolytic solution (mS/cm)		24.0	24.0	24.0
Leakage current (μA)		0.8	1.0	2.2
Electrostatic capacity (μF)	Before no-load test	54.8	54.9	54.5
	After no-load test	53.5	53.4	52.2
Equivalent series resistance (Ω)	Before no-load test	0.062	0.063	0.061
	After no-load test	0.063	0.065	0.112
Change of appearance after no-load test		Not changed	Not changed	Blistering observed at sealing portion

As described in the specification beginning at page 68, line 6, the increase of ESR (equivalent series resistance) after a no-load test was large for Comparative Example 1 as compared to ESR in the Examples, and the occurrence of blistering due to generation of gas in the capacitor was recognized at the portion of sealing rubber in Comparative Example 1. No change occurred for Examples 1 and 2. Also, the leakage current was less in the Examples compared to the Comparative Example.

Limiting the water content, as recited in the claims, is possible only when efforts are undertaken to exclude moisture. As described in the specification, without taking precautions

to limit moisture content, moisture is introduced during construction of the capacitor. Thus, as described at page 23, line 30 to page 24, line 4, water content must be controlled in the electrolytic solution *per se*. Moisture must also be controlled in the anode and cathode, as described at page 24, lines 9-12; the separator, as described at page 24, lines 14-23; and the atmosphere, as described at page 25, lines 21-26.

Shiono et al discloses an aluminum electrolytic capacitor containing an electrolyte which comprises a solution of a particular quaternary salt of a particular compound having an N,N,N'-substituted amidine group (page 3, lines 37-40). The solvent for the solution may be an organic solvent and/or water (page 6, lines 43-44), and when water is used in combination with an organic solvent, the proportion of water is preferably not more than 5% by weight, more preferably not more than 3% by weight, most preferably not more than 1% by weight, based on the weight of the electrolyte (page 7, lines 18-20).

Based on the above disclosure in Shiono et al, the Examiner finds that the present invention is anticipated.

In reply, while the above suggests that Shiono et al wishes to limit the amount of water in their electrolyte solvent when the solvent contains water and an organic solvent, Shiono et al does not appreciate the inevitable presence of water if steps are not taken to limit water content, as discussed above, **even if water is not intentionally added**. Indeed, in the description of the examples in Shiono et al, there is no disclosure with regard to excluding moisture, either from any of the components or from the atmosphere.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

All of the presently-pending active claims are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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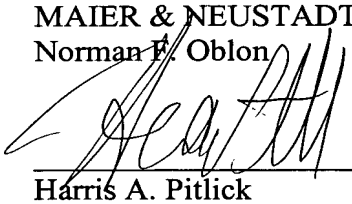

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